

Proposal Reviews

#46: McNear Peninsula Habitat Restoration Project

City of Petaluma

Final Selection Panel Review

Research and Restoration Technical Panel Review

Land Acquisition

Bay Regional Review

External Scientific Review

#1

#2

#3

Environmental Compliance

Budget

Final Selection Panel Review:

CALFED Bay-Delta 2002 ERP PSP Final Selection Panel Review

Proposal Number: 46

Applicant Organization: City of Petaluma

Proposal Title: McNear Peninsula Habitat Restoration Project

Please provide an overall evaluation rating.

Fund	
As Is	-
In Part	-
With Conditions	-
Consider as Directed Action	-
Not Recommended	X

Amount: **\$0**

Conditions, if any, of approval (if there are no conditions, please put "None"):

None

Provide a brief explanation of your rating:

The proposed project would acquire two parcels to contribute to a total of 34 acres that would be regraded to and restored to create riparian habitat and reduce sedimentation in this reach of the Petaluma River. The proposal was not recommended for funding by the technical review panel because: (1) it lacks considerable detail, including information regarding pre-construction and post-construction monitoring plans, (2) it is based on "weak" science, and (3) its educational benefits as described are unclear. In addition, the proposed project would occur in an area that is not now a high ERP habitat restoration priority. The Selection Panel reviewed the comment letter from a local assemblyman, but sees no reason to revise or overrule the evaluation of the technical panel.

Research and Restoration Technical Panel Review:

CALFED Bay-Delta 2002 ERP PSP Research and Restoration Technical Panel Review Form

Proposal Number: 46

Applicant Organization: City of Petaluma

Proposal Title: McNear Peninsula Habitat Restoration Project

Review:

Please provide an overall evaluation summary rating:

Superior: outstanding in all respects;

Above Average: Quality proposal, medium or high regional value, and no significant administrative concerns;

Adequate: No serious deficiencies, no significant regional impediments, and no significant administrative concerns;

Not Recommended: Serious deficiencies, significant regional impediments or significant administrative concerns.

Overall Evaluation Summary Rating	Provide a brief explanation of your summary rating
-Superior	The applicants might consider submitting next year a detailed Phase I proposal to develop a design plan that should include a detailed pre-construction and post-construction monitoring plan. The panel felt the science was weak (see the specific comments in the sections above) and the education usage and benefits need to be more detailed.
-Above average	
-Adequate	
XNot recommended	

1. **Goals and Justification.** Does the proposal present a clear statement of goals, objectives and hypotheses? Does the proposal present a clear justification and conceptual model for the project?

Goals. The goal of this project is to restore a dredged material island along the Petaluma River. It is 34 acres consisting of 3 parcels (10, 20, 3.5 acres). Parcel 1 is currently owned by the city, the other two should be owned by March 2002. Currently livestock have denuded the area and there is a lot of sediment going into the river from this site due to erosion. They want to re-grade the slopes, having a riparian buffer strip at the top and brackish tidal wetland below for animal habitat. The current steep slopes are prone to failure. Significant amounts of fine particulate sediment enter the river.

Two goals are to educate the public about created habitat value and implement the Citys River Plan which was developed over a 4-year period with public participation.

Reviewer: There is no indication of how many new acres of marshland will be created nor any scientific justification that this and the reduced sedimentation will increase target species. Should taxpayer money be spent on restoring small isolated parcels of habitat? Has there been testing for contaminants?

Justification. It meets the CalFed goals of environmental education, (two information kiosks,) improving water quality (reducing sediment), and restoring shallow water and riparian habitats. For what they propose it would be a full-scale implementation project, however I don't think full implementation should be funded at this time. See my later comments.

What is the sediment load in the river is now?

Reviewer: The City's primary goal is to build a park. If the daily rental of a school bus is \$500 the project cost could be equivalent to nearly 10,000 trips to other wildlife areas, reserves, refuges, etc. in the region. Proposed expenditures may not warrant the public expense. How many acres of new aquatic habitat would be created? How is the response of the faunal community to reduced sedimentation addressed?

2. **Likelihood of Success (Approach, Feasibility, Capabilities and Performance Measures).** Is the project likely to succeed based on the approach, feasibility and project team capabilities? Are the proposed performance measures adequate for measuring the project's success?

The approach should meet the project objectives. The area would be closed to livestock grazing and the slopes would be stabilized. During Year 1 they will conduct an intense reconnaissance of the site, perform an aquatic and terrestrial topographic survey to prepare a base map of the site, identify the slope stabilization and bioengineering alternatives, obtain permits, involve the public in the design process via series of public meetings, complete the design and construction documents, and select a contractor. Construction will take place in Year 2 and a post-construction monitoring plan will be completed. Year 3 involves the monitoring. The monitoring plan is aimed at water quality and includes monthly sampling of turbidity, TSS, TDS, temperature, and pH adjacent to and upstream and downstream of the peninsula. One trace metal sample will be taken. They will also sample aquatic species.

A pre-construction monitoring plan needs to be done that is equivalent to the post-construction monitoring in order to make later comparisons for purposes of determining project success. It doesn't appear that the intense reconnaissance of the site to be conducted in Year 1 would be at all equivalent to the post-construction monitoring effort.

Since the City wants to restore and preserve it we are assuming it is no longer an active dredge material site. Are there any toxic materials in the dredge material?

Except in the Executive Summary, we see no mention of plantings on the slope or in the wetland. Since they refer to it as a bioengineered design we assume that planting would be involved. But there is no list of species for the riparian habitat or for the brackish-tidal wetland. In the Executive Summary they do mention willows, grasses and woody shrubs and oak and bay. But more detail would be helpful. What species of grasses and shrubs, for example, and where along the slope? What species would be planted in the wetland?

This project will not result in novel methodologies since they are using bioengineering techniques already well established. The monitoring data may provide useful resource information to other restoration projects in the region.

Reviewer: Little new knowledge will be gained. The non-peer reviewed abstracts and proceedings cited are not commensurate with scientific credibility.

Feasibility. The project is certainly feasible. It is fairly well documented. They provide good diagrams of the stabilizing alternatives and good literature documentation supporting the bioengineering success of similar projects. However, they do not provide details on species to be planted. There is a high likelihood of success. The scale of the project is consistent with the objectives.

Reviewer: Its a straightforward engineering solution.

Capabilities. The team looks quite capable.

Performance Measures. Their performance measures are based on the monitoring plan. There is not a lot of detail in the monitoring plan but they will be developing a more comprehensive protocol in the planning portion of the project in Year 2. If they address all the parameters that they mention in the proposal the monitoring should be quite adequate. However, in order to determine whether or not the construction project actually enhances health of the peninsula aquatic, wetland, and riparian habitats a pre-construction monitoring should be conducted that will be equivalent to the post-construction monitoring, at least in the surrounding aquatic habitat.

Reviewer: There is no way to judge whether the proposed monitoring is sufficiently sensitive to determine that the projects performance and success criteria have been met.

3. **Outcomes and Products.** Will the project advance the state of scientific knowledge in general and/or make an important contribution to the state of knowledge of the Bay-Delta Watershed? For restoration proposals, is the project likely to contribute to ecosystem restoration or species recoveries in a significant way? Will the project produce products useful to decision-makers and scientists?

The products they cite are: reductions in fine sediment, increases in terrestrial and aquatic animal species, reintroduction of native riparian plants, the completion of a community project, and a new recreation area. In order to make the monitoring effort worthwhile they need to do it pre-construction as well. There will be interpretive outcomes of value for the community.

Reviewer: How many people would use the park? How many schools would visit each year? What are the lessons to be learned? What are the hands-on activities proposed?

4. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

The City owns 10 acres of the peninsula. They have a grant into the Sonoma County Agricultural Preservation and Open Space District which was to be completed 2001 (outcome?) for the purchase of the central 20-acre parcel (\$2 million). The owner of the other 3.5-acre parcel will deed it to the city or grant an easement to the City. The City has put forth a lot of effort to get to this stage.

They say there is a cost share of \$2 million, but this is for the purchase of the land. So it does not actually cost share the project for which they are requesting approximately \$2.9 million for design, construction, and monitoring.

It is difficult to assess the hefty, almost \$3 million budget without a design plan in place. With construction for example, without more details on how many linear feet of bank need to be stabilized and how many plants need to be purchased, etc., etc., we cant evaluate the budget. The same is true with the monitoring portion - all the details have not yet been worked out. They need to do a pre-construction monitoring and this would need to be added to the budget.

The budget is just too high to warrant funding as written. We suggest that one possibility would be to fund the design work for Year 1, which should include a detailed monitoring plan. In a subsequent project, the pre-construction monitoring and the construction work on one of the two smaller parcels (demonstration project) and the post-construction monitoring on that parcel could possibly be funded. If all looks good a third project on restoration of the rest of the peninsula and its monitoring could be possible.

A reviewer feels that \$4.8 million, or about \$142,000 per mostly upland acre, is an exorbitant figure to restore a very limited amount of natural habitat that may or may not (a poorly documented effort) truly benefit sensitive species and the local ecosystem. Is CalFeds purview shoreline stabilization and public parks or restoration of natural habitats and increased production of sensitive species? If the latter is the case, the cost benefits of this project are in doubt.

5. **Regional Review.** How did the regional panel(s) rank the proposal (High, Medium, Low)? Did the regional panel(s) identify significant benefits (regional priorities, linkages with other activities, local involvement) or impediments (local constraints, conflicts with other activities, lack of local involvement) to this proposal? What were they?

Rank = Medium

The reviewer states that although the site is a good one for restoration, there was not good demonstration of supporting CalFed goals and target species and the costs are exorbitant. The applicants did not provide information regarding linkages to other projects. They need more detail on the environmental education aspect of the project. Funding the planning part is suggested if they establish clear linkages to CalFed priority species and do it at a reasonable cost.

6. **Administrative Review.** Were there significant concerns about the proposal with regard to the prior performance, environmental compliance and budget administrative reviews? What were they?

Prior Performance .no reviews, no previously funded projects listed in the proposal.

Environmental Compliance They might need a State Lands Commission land use lease.

Budget Budget Summary show Federal Funds. No explanation of indirect costs other than amount. No detail on project management costs. Total sum requested differ in two places: 17a = \$2,827,000; Grand Total = \$2,877,000. Major expenses not explained.

Miscellaneous comments:

The City and local community have put a lot of effort into obtaining this land for enhancement and protection as a natural area and developing the River Plan for the area. If funded it would be best funded in stages once more detail is added. As the proposal was written, the large \$3 million budget cannot be evaluated without more detail and thus cannot be justified. Pre-construction monitoring is a must if something of scientific value is to result.

External Scientific Review. 1 - Good, 2 - Poor (1 was fair to poor)

Land Acquisition:

Proposal Number: 46

Applicant Organization: City of Petaluma

Proposal Title: McNear Peninsula Habitat Restoration Project

1. Is the site's ecological importance documented in the proposal?

XYes -No

If yes, please import relevant text and citations here:

The site consists of three parcels totaling 34 acres of undeveloped land located near the center of the City between the Petaluma River and the McNear Channel. The site is presently used for low-value agricultural purposes (hay growing and livestock grazing). The McNear Peninsula was created over the course of the last 100 years by placement of dredging spoils on a former marshland area adjacent to the Petaluma River. The site has long been the focus of City master planning efforts that would restore and preserve it as a distinctive natural area that could combine low-impact passive recreational pursuits (hiking, bird-watching, boating, etc.) with aquatic and riparian habitat restoration efforts. The site's location near the center of the City of Petaluma gives it incredible potential as a nature study area for local school children at all grade levels, as well as a place where community residents of all ages can come to enjoy a brief respite in the middle of a bustling urban area.

The majority of the site is a flat plateau, and lies between elevation 10 and 14 feet, NGVD. The edges of the plateau consist of steep slopes that face the Petaluma River and McNear Channel. Soils on the site are predominantly clayey silts that were originally dredged from the Petaluma River and are lacking in internal structure. Due to livestock overgrazing and lack of fencing, the entire site has been virtually denuded of all vegetation except for hay straw and some non-native brush species. No significant populations of any native plant species exist on the site at the present time. Aquatic vegetative habitat consists of a narrow band of alkali bullrush and other brackish water plants growing in a constricted intertidal zone at the toe of slope around the perimeter of the peninsula. The threatened Sacramento split-tail minnow can occasionally be observed cruising in a few plants, offering a tantalizing glimpse of what might be a much more numerous local resident, if this sheltering habitat were more extensive.

Livestock grazing over the years has contributed to the degradation of all sideslopes facing the river and McNear Channel. Slopes average 1H to 1V or steeper, are prone to localized slope failures, and are nearly vertical at many locations. The combination of steep slopes composed of very fine clay soils with no significant structural development or vegetative cover makes the site the source of a very significant amount of fine particulate sediment entering the river. As the soil dries, it forms into small clods, crumbs or granules that move by either wind action, boat wakes washing up on the unprotected shoreline, gravity, or direct raindrop impact. The hooves of grazing livestock also easily dislodge the soil. Once mobilized, the granules quickly move downslope and are deposited directly into the river, where the granules dissolve, dispersing large quantities of fine colloidal sediment that chokes the water column, giving it an ink-like appearance. The near total lack of vegetation on the site offers only paltry cover for rodents and other small animals and provides virtually no

shading over the water or cover for waterfowl.

The primary objective of this project will be to stabilize the existing oversteepened riparian slopes by permanently closing the area to livestock grazing, re-grading the slopes to softer, more stable gradients, and providing additional slope stability and soil retention through the application of appropriate bioengineering techniques and the creation of a riparian buffer strip composed of native oaks, bays and willows. In addition, the project will create extensive new areas of brackish and tidal marshland to serve as sheltering habitat for the threatened Sacramento split-tail minnow, the waterfowl that are attracted to marshlands, and seasonal visits by threatened salmon and steelhead populations. The proposed project will also accomplish two important secondary goals: (1) educate the public about the values of creating a diverse aquatic habitat near the center of a thriving city; and (2) Implement an important element of the City's River .

The McNear Peninsula Habitat Restoration Project will produce a variety of both tangible and intangible products.

Chief among the tangible products coming from the project will be dramatic reductions in the volume of fine sediment entering the Petaluma River from the project site, and expected significant increases in a variety of terrestrial and aquatic animal species visiting and taking up residence in the area. The reintroduction of native riparian plants and trees to the site will, over time, make it much more visually appealing as the plants and trees grow. This will dramatically alter the visual appearance of the site as it assumes a more varied and natural form in contrast to the stark emptiness that pervades it today.

*** The proposed project, if fully implemented, would largely eliminate the single largest non-point source of fine sediment in the Petaluma River basin. The detrimental effects of high-suspended sediment loads on anadromous fish migration and spawning success for listed steelhead is already well accepted. This listed species does not thrive in highly turbid water. No quantitative studies of Petaluma River sedimentation rates and turbidity levels have been reported in the scientific literature. However, it is obvious that substantial elimination of fine sediment generation from 6000 linear feet of unprotected and unstable shoreline in the middle of the Petaluma River basin, and replacing it with a like amount of created riparian habitat will be highly beneficial to future steelhead runs in the basin.**

*** This proposed project will create over 6000 linear feet of new tidal marsh and shallow water riverine wetland habitat, which is the desired habitat for the endangered Sacramento Split tail minnow, and the various aquatic birds that feed on them. By itself, this is a significant contribution of new habitat area, but the prominent and highly visible location of the project site in the middle of the City may serve to inspire citizen groups to sponsor similar habitat restoration efforts at other locations in the watershed. It is likely to have a synergistic effect for other habitat creation projects, and the ultimate cumulative benefits to habitat restoration efforts in the Petaluma River basin are likely to be substantially in excess to those that can be attributed to this project alone.**

The list of intangible benefits and products accruing from the completed project is a measure of community pride and delight associated with the long-anticipated conversion of an urban eyesore into a community asset and urban amenity:

A key element of the Petaluma River Plan, which was developed with substantial community input, will finally come to fruition, and the City will have a new, low-impact recreational area to enjoy, literally in the center of the community. As Golden Gate Park serves San Francisco and

Central Park serves New York City, the McNear Peninsula has the opportunity to create an urban oasis that will enhance both the environment and the lives of those who visit it for generations to come.

School children of all ages will have a readily accessible nature study area that is also a quiet testimonial about wise stewardship of natural resources.

Community residents and visitors alike will have a new location within easy walking distance of many homes and businesses to quietly contemplate the beauty of the restored environment.

When the project is complete, the City of Petaluma will be making a clear and unequivocal statement that, as a community, it cares about the quality of life and the natural environment in which its residents live.

Beyond making a strong pro-environment statement, the completed project will, in all likelihood serve by example as a catalyst for additional habitat restoration projects in the community, which may be funded by a variety of private-public partnerships.

The McNear Peninsula riparian habitat restoration project is being developed by the City of Petaluma in conjunction with an integrated water resources planning effort that is currently underway. The water resources element of the Petaluma General Plan 2000 - 2020 consists of a water system master plan, a reclaimed wastewater master plan, and a surface water master plan. When complete, the three plans will comprise the water element of a comprehensive update of the City's General Plan. All of the plans contain a heavy emphasis on sustainability and ecosystem enhancement. This environmental planning emphasis was first identified as a key objective for all future City planning efforts during the public involvement efforts that were conducted as part of the Petaluma River Access and Enhancement Plan development, which was adopted by the City Council in 1996. The subsequent ESA listing of coastal steelhead, Sacramento split tail minnow, and other threatened species that all require a healthy riparian ecosystem in which to thrive has reinforced citizen support for this objective. The opportunity to initiate the McNear Peninsula Habitat Restoration Project at this time through a CALFED grant comes at an extremely fortunate time in terms of anticipated community support for the project. If funded, the project is expected to serve as a catalyst for many other more modest efforts by volunteer groups such as the Boy Scouts, high school groups, and other agencies such as the Southern Sonoma County Resource Conservation District, which will benefit the entire Petaluma River ecosystem.

2. Is the owner's willingness to sell the site documented in the proposal?

XYes -No

If no, please explain:

The City of Petaluma is not seeking CALFED funds for property acquisition. Sonoma County Agricultural Preservation and Open Space District funds were previously used to acquire ownership of one parcel of land (1/3rd of the peninsula), and a new application is pending for acquisition of a large percentage of the remainder (nearly 2/3rd of the peninsula). The owner of a small (3.5 acre) residual parcel, at the tip of the Peninsula, has agreed in principal to donate the parcel to the City when the second open space grant-funded transaction has been completed.

3. Is evidence of local government support for the purchase included in the proposal?

☒Yes ☐No

If yes, please explain:

The city is the applicant.

4. Is the use proposed for the site after its purchase clearly consistent with the site's general plan designation and zoning?

☒Yes ☐No

If no, please explain:

5. Is the land mapped as prime farmland, farmland of statewide significance, unique farmland, or farmland of local importance?

☐Yes ☒No

If yes, please explain the classification:

Is the site under a Williamson Act contract?

☐Yes ☒No

Will use of the site change from agriculture after its purchase?

☒Yes ☐No ☐Not Currently in Agriculture

6. Is this a time-sensitive acquisition opportunity, according to the proposal?

☐Yes ☒No

If yes, please import relevant text here:

Other Comments:

Bay Regional Review:

Proposal Number: 46

Applicant Organization: City of Petaluma

Proposal Title: McNear Peninsula Habitat Restoration Project

Overall Ranking: -Low **XMedium** -High

Provide a brief summary explanation of the committee's ranking:

We gave it a medium for the planning aspect. This is a good candidate site for restoration. However, a low ranking was assigned to the proposed construction. Their was not good linkage to demonstrate benefit to CALFED related species or goals, and the costs appeared exorbitant.

1. Is the project feasible based on local constraints?

XYes -No

How?

Project sponsor is the local government and these kinds of restoration projects have a proven track record.

2. Does the project pursue the restoration priorities applicable to the region as outlined in the PSP?

-Yes **X**No

How?

See notes above, the goals of the project appear sound, but it is not clear that the proposed construction would support CALFED target species.

3. Is the project adequately linked with other restoration activities in the region, such as ongoing implementation projects and regional planning efforts?

-Yes **X**No

How?

No information was provided on linkages.

4. Does the project adequately involve local people and institutions?

XYes -No

How?

The project appears to propose local input. Environmental education is proposed for local residents as part of the project, but little detail on this aspect was provided.

Other Comments:

Project planning should be funded to formulate a project w/ clear linkages to CALFED priority species at a reasonable cost.

External Scientific: #1

Research and Restoration External Scientific Review Form

Proposal Number: **46**

Applicant Organization: **City of Petaluma**

Proposal Title: **McNear Peninsula Habitat Restoration Project**

Conflict of Interest Statements:

I have no financial interest in this proposal.

XCorrect

-Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

none

Review:

Please provide an overall evaluation summary rating:

Excellent: outstanding in all respects;

Good: quality but some deficiencies;

Poor: serious deficiencies.

Overall Evaluation Summary Rating	Provide a brief explanation of your summary rating
-Excellent	This is a very sketchy proposal that is short on details required to assess the possible success of the project or the scientific basis.
-Good	
X Poor	

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

The proposal is not written particularly well with few details and the objectives spread about in the text. The overall goal is to restore the McNear Peninsula from water flow to plants to inverts to fish. Hypotheses are only mentioned in passing as they are to be developed at a later time (Development of a project monitoring plan will include preparation of a written study plan identifying the experimental design, the hypotheses to be tested page 12).

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

There is no clear conceptual model outlined. The idea of restoring the site is laudable and probably justified based on the potential ecological value of this site but they do NOT justify it scientifically. We are provided sketches of possible restoration designs but no criteria (scientific or otherwise) for these various designs. Further, we are not provided any information on how the final design will be selected (e.g., will the decision be based on hydrologic-geomorphic considerations??).

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

The approach is not even outlined in any detail. No mention of water levels or flow is made it is not clear how the grade, erosion control measures or plantings will be chosen. There is no indication at all that this will be useful beyond this one site and it is not even clear from what is written here if there is sound scientific reasoning behind their plan.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

No. see comments in 2) and 3)

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

The project is actually very strong on the biological metrics that will be used to assess success. They will monitor water quality, invertebrates, and fish before and after and spatially. This is explained in a fair amount of detail. No mention however is made of measuring erosion rates or changes in grade. They will measure TSS which will tell them something about sediment inputs but will only provide a very small piece of the puzzle.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

They state that the main product is dramatic reductions in the volumes of fine sediment entering the Petaluma River. They do not propose to advance restoration techniques or develop approaches that may be used in other systems or for management purposes.

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

This is hard to evaluate. The consultants certainly have years of experience and the PI seems well versed in the biology of the system. However, the lack of details mentioned above raise concerns about whether or not the PI has really thought the project through adequately.

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

I would say the budget is extremely high for the amount of science and restoration to be completed, particularly given the fact that the results here are not likely to be useful at other sites.

Miscellaneous comments:

External Scientific: #2

Research and Restoration External Scientific Review Form

Proposal Number: **46**

Applicant Organization: **City of Petaluma**

Proposal Title: **McNear Peninsula Habitat Restoration Project**

Conflict of Interest Statements:

I have no financial interest in this proposal.

XCorrect

-Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

none

Review:

Please provide an overall evaluation summary rating:

Excellent: outstanding in all respects;

Good: quality but some deficiencies;

Poor: serious deficiencies.

Overall Evaluation Summary Rating	Provide a brief explanation of your summary rating
-Excellent	The City and local community have put a lot of effort into obtaining this land for enhancement and protection as a natural area and developing the "River Plan" for the area. I'd like to see the project succeed eventually, but I think it would be best funded in stages. As the proposal was written, the large \$3 million budget cannot be evaluated without more detail and thus cannot be justified. I also think pre-construction monitoring is a must if something of scientific value is to result.
X Good	
-Poor	

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

The goal of this project is to restore a dredged material island along the Petaluma River. It is 34 acres consisting of 3 parcels (10, 20, 3.5 acres). Parcel 1 is currently owned by the city, the other two should be owned by March 2002. Currently livestock have denuded the area and there is a lot of sediment going into the river from this site due to erosion. They want to re-grade the slopes, having a riparian buffer strip at the top and brackish tidal wetland below for animal habitat. The current steep slopes are prone to failure. Significant amounts of fine particulate sediment enter the river.

Two goals are to educate the public about created habitat value and implement the City's "River Plan" which was developed over a 4-year period with public participation.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

It meets the CalFed goals of environmental education, (two information kiosks,) improving water quality (reducing sediment), and restoring shallow water and riparian habitats. For what they propose it would be a full-scale implementation project, however I don't think full implementation should be funded at this time. See my later comments.

I would like to know what the sediment load in the river is now.

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

The approach should meet the project objectives. The area would be closed to livestock grazing and the slopes would be stabilized. During Year 1 they will conduct an "intense reconnaissance of the site", perform an aquatic and terrestrial topographic survey to prepare a base map of the site, identify the slope stabilization and bioengineering alternatives, obtain permits, involve the public in the design process via series of public meetings, complete the design and construction documents, select a contractor. Construction will take place in Year 2 and a post-construction monitoring plan will be completed. Year 3 involves the monitoring. The monitoring plan is aimed at water quality and includes monthly sampling of turbidity, TSS, TDS, temperature, and pH adjacent to and upstream and downstream of the peninsula. One trace metal sample will be taken. They will also sample aquatic species.

I think a pre-construction monitoring plan needs to be done that is equivalent to the post-construction monitoring in order to make later comparisons for purposes of determining project success. I don't get the impression that the "intense reconnaissance of the site" to be conducted in Year 1 would be at all equivalent to the post-construction monitoring effort.

Since the City wants to restore and preserve it I'm assuming it is no longer an active dredge material site. Are there any toxic materials in the dredge material?

Except in the Executive Summary, I see no mention of plantings on the slope or in the wetland. Since they refer to it as a "bio"engineered design I would assume that planting would be involved. But there is no list of species for the riparian habitat or for the brackish-tidal wetland. In the Executive Summary they do mention willows, grasses and woody shrubs and oak and bay. But more detail would be helpful. What species of grasses and shrubs, for example, and where along the slope? What species would be planted in the wetland?

I doubt that this project will result in novel methodologies since they are using bioengineering techniques already well established. The monitoring data may provide useful resource information to other restoration projects in the region.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

The project is certainly feasible. It is fairly well documented. They provide good diagrams of the stabilizing alternatives and good literature documentation supporting the bioengineering success of similar projects. However, they do not provide details on species to be planted. There is a high likelihood of success. The scale of the project is consistent with the objectives.

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

Their performance measures are based on the monitoring plan. There is not a lot of detail in the monitoring plan but they will be developing a more comprehensive protocol in the planning portion of the project in Year 2. If they address all the parameters that they mention in the proposal the monitoring should be quite adequate. However, in order to determine whether or not the construction project actually enhances health of the peninsula aquatic, wetland, and riparian habitats a pre-construction monitoring should be conducted that will be equivalent to the post-construction monitoring, at least in the surrounding aquatic habitat.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

The products they cite are: reductions in fine sediment, increases in terrestrial and aquatic animal species, reintroduction of native riparian plants, the completion of a community project, and a new recreation area. In order to make the monitoring effort worthwhile they need to do it pre-construction as well. There will be interpretive outcomes of value for the community.

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

The team looks quite capable.

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

The City owns 10 acres of the peninsula. They have a grant into the Sonoma County Agricultural Preservation and Open Space District which was to be completed 2001 (outcome?) for the purchase of the central 20-acre parcel (\$2 million). The owner of the other 3.5-acre parcel will deed it to the city or grant an easement to the City. The City has put forth a lot of effort to get to this stage.

They say there is a cost share of \$2 million, but I think this is for the purchase of the land. So it does not actually cost share the project for which they are requesting approximately \$2.9 million for design, construction, and monitoring.

It is difficult to assess the hefty, almost \$3 million budget without a design plan in place. With construction for example, without more details on how many linear feet of bank need to be stabilized and how many plants need to be purchased, etc., etc., I can't evaluate the budget. The same is true with the monitoring portion - all the details have not yet been worked out. I also think they need to do a pre-construction monitoring and this would need to be added to the budget.

The budget is just too high to warrant funding as written. I would suggest funding the design work for Year 1, which should include a detailed monitoring plan. In a subsequent project I would suggest funding the pre-construction monitoring and the construction work on one of the two smaller parcels (demonstration project) and the post-construction monitoring on that parcel. If all looks good I would consider funding a third project on restoration of the rest of the peninsula and its monitoring.

Miscellaneous comments:

External Scientific: #3

Research and Restoration External Scientific Review Form

Proposal Number: 46

Applicant Organization: City of Petaluma

Proposal Title: McNear Peninsula Habitat Restoration Project

Conflict of Interest Statements:

I have no financial interest in this proposal.

☒Correct

☐Incorrect

In the blank below please explain any connection to proposal, to applicant, co-applicant or subcontractor or to submitting institution (write "none" if no connection):

none

Review:

Please provide an overall evaluation summary rating:

Excellent: outstanding in all respects;

Good: quality but some deficiencies;

Poor: serious deficiencies.

Overall Evaluation Summary Rating	Provide a brief explanation of your summary rating
-Excellent	Fair - Poor. The proposal lacks necessary detail for a full and comprehensive evaluation.
-Good	
XPoor	

1. **Goals.** Are the goals, objectives and hypotheses clearly stated and internally consistent? Is the concept timely and important?

In order of apparent importance, this project seeks to: a) build a public park with some environmental education opportunities; b) achieve sedimentation control of an eroding shoreline; and c) restore habitat including that for sensitive species (see p. 4, Project Justification). I have the following problems with the goals as stated. McNear Peninsula appears to be a dredged materials disposal area overlying an original brackish marsh. If so, any allusion to restoration is misleading; rather than restore an original marshland (I realize that to remove 10-14 ft of dredged spoil to return the site to its original marsh elevations will likely be cost prohibitive), the project seeks to stabilize a shoreline, plant it and create a public amenity. If this is consistent with CALFEDs mission, that is okay, but this project really does not include meaningful restoration elements, certainly not significant ones as stated by the authors. Comments like: conversion from low-value grazing to productive brackish water and riparian fringe habitat; re-create shallow brackish water habitat

suitable for endangered Sacramento split tail minnow, [and] other species of fish; the project will create extensive [emphasis added] new areas of brackish and tidal marshland, etc. are neither backed by science, nor the project design (as I understand it). Although, the authors state that they will reduce the slope of the shoreline and stabilize it, they seem to give no indication of just how many new acres of marshland will be created nor is there any scientific justification whatever, that the increase in marsh area will increase the production of sensitive, and T&E, species build it and they will come, just doesnt justify the expense of millions of dollars to build a park. Also, as written, we have no way of judging the extent of sedimentation impacts on nearby waters; nor whether reducing local sediment input will really result in more usage of the area by sensitive species. This is a small parcel of mostly upland elevations with an apparently narrow marshland ringing it; the habitat isolation and fragmentation of the original marshland in this area of Petaluma may preclude a meaningful increment of new production in sensitive species. CALFED should consider this in their allocation of funding, should taxpayer money be spent on restoring small, isolated parcels of habitat [perhaps as habitat gardening, or what amounts to be construction of a corporate park], or are the funds better spent trying to achieve more extensive critical mass in contiguous habitat parcels? Tough question!

Has any one done any testing of these dredge spoils for contaminants, especially since they are fine materials? You dont want a public health risk issue associate with public access to the site.

2. **Justification.** Is the study justified relative to existing knowledge? Is a conceptual model clearly stated in the proposal and does it explain the underlying basis for the proposed work? Is the selection of research, pilot or demonstration project, or a full-scale implementation project justified?

There really is not enough detail in this proposal to addresses these questions. Without far more detailed evaluation of the site, I cannot state with confidence that a full-scale project is justified nor warranted.

Page 4 makes it clear that the citys primary goal is to build a park; restoring marshland is clearly a secondary goal. The importance of environmental education opportunities at the site is highly laudable, but if one assumes that the daily rental of a school bus is about \$500 (thats what is charged in our part of the country), then the project cost of \$4, 827,000 (including land acquisition) is equivalent nearly 10,000 bus trips to other wildlife management area, reserves, refuges, etc. in the region. I am not so certain that the proposed expenditures for environmental education at this small site warrants the public expense of the project.

Again, I cannot tell from this proposal just how many acres of new aquatic habitat will be created. Although also laudible, the potential response of the faunal community, especially sensitive species, to a reduction of sediment input from the site is not addressed in detail, but rather only in the most generic terms. I have no way of judging the cost-benefits of spending in excess of \$4 million to reduce local sediment input. The US Army Corps of Engineers created this spoil pile and the sedimentation problem, the City should sue them to recover environmental damages, especially if the site turns out to be contaminated and ultimately achieves status as a hazardous waste site.

3. **Approach.** Is the approach well designed and appropriate for meeting the objectives of the project? Are results likely to add to the base of knowledge? Is the project likely to generate novel information, methodology or approaches? Will the information ultimately be useful to decision-makers?

This appears to be a shoreline stabilization and planting project. As such, very little new knowledge is to be gained, nor are best management approaches for this type of project likely to be advanced in any substantial way. I know that consultants are not in the business of conducting scientific studies, but to comment that the technical literature is replete [sic] with examples and case studies describing successful projects that were based on bio-engineered erosion control approaches and to suggest that the non-peer reviewed abstracts and proceedings they have listed is commensurate with scientific credibility is an insult to the scientific community.

4. **Feasibility.** Is the approach fully documented and technically feasible? What is the likelihood of success? Is the scale of the project consistent with the objectives?

As no details are provided for alternative bioengineering approaches, I have no way of judging this. Ditto on the chances of success, although this does not appear to be rocket science, but rather a straightforward engineering solution.

5. **Project-Specific Performance Measures.** Does the project include appropriate performance measures to measure success relative to the project's goals and objectives? Is there enough detail as to how the performance measures will be quantified? For restoration projects, are monitoring plans explicit and detailed enough to determine if performance measures will be adequately assessed?

As written, there are virtually no performance and/or success criteria established for the project. Additionally, is no way to judge that the proposed monitoring program is sufficiently sensitive to determine that the projects performance and success criteria have been met, nor whether the restoration is sustainable.

6. **Products.** Are products of value likely from the project? Specifically for restoration projects, are products of value also likely from the monitoring component? Are interpretative outcomes likely from the project?

It seems to me, that stating key goals of the project to include a public park and educational opportunities should include some performance criteria and monitoring to gauge the projects success. How many people are likely to use the park, and what are the quantifiable values they will gain from their visits? How many schools are likely to visit the site each year, and what lessons learned will children come away with? What are the hands on activities proposed? If these types of monitoring are not relevant to the project, then the natural resources monitoring program as proposed is routine, and as written, very amateurish. There is little justification for individual components; e.g., why zooplankton and macro- invertebrate monitoring? If the goal is to demonstrate increased production of sensitive species, then the monitoring program must be conducted long enough to establish successful recruitment of sensitive species into adult populations, and to demonstrate an increase in the local populations of adults. To do so, monitoring should be conducted for a minimum of five years, probably much longer. The authors propose an experimental design, but no experiments are proposed. They are not explicit that their sampling design will be compatible with other monitoring going on in the region (frequency of sampling, identical methods, etc., etc.). They make no mention of QA/QC protocols. There are no statements on how their sampling design will address dispersion, statistical power, meeting the assumptions of the statistical analyses, no is there any information on the kind of sampling design they will employ. Most importantly, there is nothing in their design that will quantify any real change in use of the site by sensitive species, aquatic guilds, etc. If this is what CALFED is looking for, this proposal fall far short.

7. **Capabilities.** What is the track record of applicants in terms of past projects? Is the project team qualified to efficiently and effectively implement the proposed project? Do they have available the infrastructure and other aspects of support necessary to accomplish the project?

Black and Veatch Corporation is a reasonably good consulting firm with the necessary infrastructure to conduct this project. I do not know the credentials of Hanson Environmental, nor have any resumes been included with the proposal.

8. **Cost/Benefit Comments.** Is the budget reasonable and adequate for the work proposed?

This is the conundrum for this reader. If public money in CALFEDs purview can be spent on shoreline stabilization per se and construction of public parks that is one thing. But if the money is reserved for restoration of natural habitats and increased production of sensitive species (the hook that seems to drive much of what is said in the CALFED proposals I have reviewed), then I am much more concerned with the cost-benefits of this project. It will cost \$4,827,000 (including land acquisition) for restoring the marshland fringe of a 34 acre fragmented and isolated habitat, or about \$142,000 per mostly upland acre. This seems an exorbitant figure, much higher than most published figures for aquatic habitat/wetland restoration. Although parks and environmental educational opportunities are extremely important, I can not in good conscience recommend the expenditure of public money on what at the moment is a poorly documented effort to restore a very limited amount of natural habitat, that I have know way of knowing will truly benefit sensitive species and the local ecosystem.

Miscellaneous comments:

None

Environmental Compliance:

Proposal Number: 46

Applicant Organization: City of Petaluma

Proposal Title: McNear Peninsula Habitat Restoration Project

1. Are the legal or regulatory issues that affect the proposal identified adequately in the proposal?

-Yes ☒No

If no, please explain:

Would require a State Lands Commission land use lease.

2. Does the project's timeline and budget reflect adequate planning to address legal and regulatory issues that affect the proposal?

☒Yes -No

If no, please explain:

3. Do the legal and regulatory issues that affect the proposal significantly impair the project's feasibility?

-Yes ☒No

If yes, please explain:

Other Comments:

Budget:

Proposal Number: 46

Applicant Organization: City of Petaluma

Proposal Title: McNear Peninsula Habitat Restoration Project

1. Does the proposal include a detailed budget for each year of requested support?

☒Yes ☐No

If no, please explain:

Budget Summary shows "Federal Funds"

2. Does the proposal include a detailed budget for each task identified?

☒Yes ☐No

If no, please explain:

3. Does the proposal clearly state the type of expenses encompassed in indirect rates or overhead costs?

☐Yes ☒No

If no, please explain:

Couldn't find any textual explanation other than the amount

4. Are appropriate project management costs clearly identified?

☐Yes ☒No

If no, please explain:

shown as a dollar amount. found no detail

5. Do the total funds requested (Form I, Question 17A) equal the combined total annual costs in the budget summary?

☐Yes ☒No

If no, please explain (for example, are costs to be reimbursed by cost share funds included in the budget summary).

17.a. = \$2,827,000.00

Grand Total = \$2,877,000.00

6. Does the budget justification adequately explain major expenses?

-Yes **X**No

If no, please explain:

Didn't adequate costs identification.

7. Are there other budget issues that warrant consideration?

-Yes **X**No

If yes, please explain:

Other Comments: